

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-29 (Cancelled)

Claim 30 (Currently Amended) A process for manufacturing a substrate, at least one part of the surface of the substrate has been rendered hydrophobic, wherein said hydrophobic surface structure comprises ~~an essentially mineral silicon containing~~ a silicon dioxide sublayer formed at least partly on the surface of the substrate, and an outer layer of hydrophobic agent grafted onto said sublayer, wherein said sublayer had a surface that was in an activated state before being brought into contact with said hydrophobic agent, wherein said process comprises:

treating a surface of the ~~silicon-containing mineral~~ sublayer to activate the surface of the ~~silicon-containing mineral~~ sublayer in at least one pass, depositing the coating layer of hydrophobic agent, in at least one pass, on the surface, in the activated state, of the ~~silicon-containing mineral~~ sublayer formed at least partly on the surface of the substrate and

wherein said treating is carried out under conditions that allow ~~a silicon-containing~~ the sublayer to be etched, with a plasma of ~~at least one fluorine-containing gas chosen from SF₆, CF₄, C₂F₆ and other fluorinated gases, optionally~~ combined with oxygen in an amount up to 50% by volume of the etching plasma; and

wherein said treating is carried out under conditions so that the activated surface of the etched sublayer has an RMS roughness of from a 2.116 nm to 30 nm.

31. (Currently Amended) The process according to Claim 30, wherein the hydrophobic agent is deposited within a time of from 1 second to 15 minutes, after the activation of the surface of the ~~silicon-containing mineral~~ sublayer.

32. (Previously Presented) The process according to Claim 30, wherein the activation is monitored.

33. (Currently Amended) The process according to Claim 30, wherein the ~~silicon-~~
~~containing~~ sublayer is deposited, ~~and~~, on the substrate by vacuum cathode sputtering.

34. (Currently Amended) The process according to Claim ~~[[33]]~~ 30, wherein the ~~silicon-~~
~~containing~~ sublayer is deposited, ~~and~~, on the substrate by magnetron sputtering, ion
beam sputtering, or by low-pressure plasma-enhanced chemical vapour deposition (PECVD),
or atmospheric- pressure PECVD.

35. (Currently Amended) The process according to Claim 34, ~~further comprising~~
~~depositing a layer of SiO₂, as silicon-containing layer,~~ wherein the sublayer is deposited by
PECVD, with a mixture of an organic or nonorganic, silicon-containing precursor and an
oxidizer, wherein the subsequent activation being carried out in the same chamber or in a
separate chamber.

36. (Previously Presented) The process according to Claim 35, wherein the silicon-
containing precursor is SiH₄, hexamethyldisiloxane, tetraethoxysilane and
tetramethyldisiloxane.

37. (Previously Presented) The process according to Claim 30, wherein the outer layer
of hydrophobic agent is based on a hydrophobic agent is a fluorosilane and wherein the
fluorosilane outer layer of hydrophobic agent is deposited by wiping-on, evaporation or
spraying of a solution containing the fluorosilane, or by dipping, spin-coating, or flow-
coating with a solution containing the fluorosilane.

38. (Previously Presented) The process according to Claim 30, wherein the substrate
is formed by a plate, whether plane or with curved faces, of monolithic or laminated glass, of
glass-ceramic or of a hard thermoplastic.

39. (Cancelled)

40. (Currently Amended) The process according to Claim 30, wherein the ~~silicon-~~
~~containing~~ sublayer further comprises aluminum or carbon, Ti, Zr, Zn and S.

41. (Currently Amended) The process according to Claim 40, wherein the ~~silicon-containing~~ sublayer further comprises aluminum in an amount up to 8% by weight.

42. (Currently Amended) The process according to Claim 30, wherein the ~~activated surface of the silicon-containing~~ sublayer has a thickness of 20 nm to 250 nm.

43. (Currently Amended) The process according to Claim 30, wherein the ~~activated surface of the silicon-containing~~ sublayer has a thickness of 30 nm to 100 nm.

44. (Currently Amended) The process according to Claim 30, wherein the ~~activated surface of the silicon-containing~~ sublayer has a thickness of 30 nm to 75 nm.

45. (Cancelled).

46. (Currently Amended) The process according to Claim 30, wherein the activated surface of the ~~silicon-containing~~ sublayer has an actual developed area at least 40% greater than the initial plane area.

47. (Previously Presented) The process according to Claim 30, wherein the outer layer of hydrophobic agent is based on a hydrophobic agent is:

(a) an alkylsilane of formula (I):



in which:

n ranges from 0 to 30, more particularly from 0 to 18;

m = 0, 1, 2 or 3;

R represents an optionally functionalized organic chain; and

X represents a hydrolyzable residue that is an OR^0 residue, where R^0 represents hydrogen; or a linear, branched or cyclic alkyl residue, an aryl residue; or a halo residue;

(b) a compound with grafted silicone chains;

(c) a fluorosilane that has a formula (II):



in which:

R^1 represents an C_1-C_9 monofluoroalkyl, oligofluoroalkyl or perfluoroalkyl residue; or a monoaryl, oligoaryl or perfluoroaryl residue;

A represents a hydrocarbon chain, optionally interrupted by a heteroatom selected from O or S;

R^2 represents a linear, branched or cyclic alkyl residue, or an aryl residue; X represents a hydrolyzable residue that is an OR^3 residue, where R^3 represents hydrogen or a linear, branched or cyclic, alkyl residue; an aryl residue; or a halo residue; and

$p = 0, 1$ or 2 .

48. (Currently Amended) The process according to Claim 30, wherein the layer of hydrophobic agent has a weight per unit area of grafted fluorine of between $0.1 \mu\text{g}/\text{cm}^2$ and $3.5 \mu\text{g}/\text{cm}^2$.